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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
08/963,096	11/03/1997	ZUO-YU ZHAO	190.0001-010	9667

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EXAMINER
NELSON, AMY J

ART UNIT	PAPER NUMBER
1638	

DATE MAILED: 09/03/2002

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	08/963,096	ZHAO ET AL.	
	Examiner	Art Unit	
	Amy Nelson	1638	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *21 March 2000* .

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *74-89* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *74-89* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

11)☐ The proposed drawing correction filed on _____ is: a)☐ approved b)☐ disapproved by the Examiner.

If approved, corrected drawings are required in reply to this Office action.

12)☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

13)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____ .

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

14)☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).

a) ☐ The translation of the foreign language provisional application has been received.

15)☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☒ Information Disclosure Statement(s) (PTO-1449) Paper No(s) 15 .
4) ☐ Interview Summary (PTO-413) Paper No(s). _____ .
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other:

DETAILED ACTION

Claim Rejections - 35 USC § 112

1. The following is a quotation of the first paragraph of 35 U.S.C. 112:

> The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

2. Claims 75, 77 and 82 are rejected under 35 U.S.C. 112, first paragraph, as containing subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention. This is a NEW MATTER rejection.

Applicant does not point to support in the instant specification for the phrase:

Claim 77, "a field corn other than A188, B73 or a hybrid of A188 or B73" (The specification at pages 2 and 25 only supports "transformed inbred lines other than line A188");

Claim 82, "a field corn more difficult to transform by *Agrobacterium* than A188, B73 or a hybrid of A188 or B73" (The specification at pages 2 and 25 only supports "transformed inbred lines other than line A188");

Claims 75 and 80, "field corn;" and

Claims 85 and 88, "field maize."

Applicant must delete the NEW MATTER in response to this rejection.

3. The following is a quotation of the second paragraph of 35 U.S.C. 112:

> The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

4. Claims 74-89 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

At Claims 74, 77, 79, 82, and 84, line 1, it is recommended that the phrase "characterized in that it has been stably transformed" be changed to --stably transformed-- for conciseness.

At Claims 74, 77, 79, 82, and 84, line 2, the phrase "to express a DNA of interest" is unclear. It is recommended that the phrase be changed to recite --comprising a DNA of interest--.

At Claim 74, line 2, the phrase "recalcitrant to transformation" is indefinite. Because the term "recalcitrant" is relative, it is not clear what is encompassed by the phrase. Moreover, it is not clear what aspect of transformation is problematic, or how recalcitrance is measured.

At Claims 75 and 80, the phrase "field corn" is indefinite. The phrase is not clearly defined in the specfication, and hence it is not clear what is encompassed by the phrase. Appropriate correction is required to clarify the metes and bounds of the claimed invention.

At Claim 82, line 3, the phrase "more difficult to transform" is indefinite because it is not clear what aspect of transformation is difficult and/or how difficulty is measured. Appropriate clarification is required.

At Claims 85 and 88, the phrase "field maize" is indefinite. The phrase is not clearly defined in the specfication, and hence it is not clear what is encompassed by the phrase. Appropriate correction is required to clarify the metes and bounds of the claimed invention.

At Claim 87, line 3, the phrase "capable of transferring" is indefinite because it is unclear if it does or does not transfer. It is recommended that the phrase be changed to --that transfers--.

At Claim 87, line 7, the phrase "capable of inhibiting" is indefinite because it is unclear if it does or does not inhibit. It is recommended that the phrase be changed to --that inhibits--.

At Claim 87, line 8, the phrase "to select for the transformed embryo" does not make sense. Line 6 recites "culturing the transformed embryo," implying that there is only a single embryo. Hence, it is not clear what the transformed embryo is selected from.

At Claim 87, line 10, the phrase "recalcitrant to transformation" is indefinite. Because the term "recalcitrant" is relative, it is not clear what is encompassed by the phrase. Moreover, it is not clear what aspect of transformation is problematic, or how recalcitrance is measured.

Claim Rejections - 35 USC § 102

5. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless -
>
> (a) the invention was known or used by others in this country, or patented or described in a printed publication in this or a foreign country, before the invention thereof by the applicant for a patent.
>
> (b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.
>
> (e) the invention was described in a patent granted on an application for patent by another filed in the United States before the invention thereof by the applicant for patent, or on an international application by another who has fulfilled the requirements of paragraphs (1), (2), and (4) of section 371(c) of this title before the invention thereof by the applicant for patent.

The changes made to 35 U.S.C. 102(e) by the American Inventors Protection Act of 1999 (AIPA) do not apply to the examination of this application as the application being examined was not (1) filed on or after November 29, 2000, or (2) voluntarily published under 35 U.S.C. 122(b). Therefore, this application is examined under 35 U.S.C. 102(e) prior to the amendment by the AIPA (pre-AIPA 35 U.S.C. 102(e)).

6. Claims 74-89 are rejected under 35 U.S.C. 102(a) as being anticipated by Ishida *et al.* (Nature Biotechnology 14: 745-750, 1996).

The claims are indefinite for the reasons discussed *supra*. In particular, "recalcitrant" and "more difficult to transform" are indefinite in meaning and hence any maize plant is understood to be "more difficult to transform" than B73 or a B73 hybrid, and the claims read on essentially any maize plant.

Ishida teaches transformed maize plants and seeds, including A188 maize plants and seeds, as well as A188 hybrid plants and seeds (abstract). Hence, all of the claim limitations are anticipated by Ishida.

7. Claims 74-89 are rejected under 35 U.S.C. 102(b) as being anticipated by Goldman *et al.* (U.S. Patent 5,177,010; issued 1/5/93).

The claims are indefinite for the reasons discussed *supra*. In particular, "recalcitrant" and "more difficult to transform" are indefinite in meaning and hence any maize plant is understood to be "more difficult to transform" than B73 or a B73 hybrid or A188 or a A188 hybrid, and the claims read on essentially any maize plant.

Goldman teaches transformed maize plants and seeds (abstract), including Iochief maize plants and seeds (Examples 1, 2, 4 and 5, 7-10), and C58 plants and seeds (Examples 3, 6). Hence, all of the claim limitations are anticipated by Goldman.

8. Claims 74-89 are rejected under 35 U.S.C. 102(e) as being anticipated by Hiei *et al.* (U.S. Patent 5,591,616; filed 7/6/93).

The claims are indefinite for the reasons discussed *supra*. In particular, "recalcitrant" and "more difficult to transform" are indefinite in meaning and hence any maize plant is understood to be "more difficult to transform" than B73 or a B73 hybrid or A188 or a A188 hybrid, and the claims read on essentially any maize plant.

Hiei teaches transformed monocotyledon plants and seeds, including maize plants and seeds (Example 2, for example). Hence, all of the claim limitations are anticipated by Hiei.

Double Patenting

9. The nonstatutory double patenting rejection is based on a judicially created doctrine grounded in public policy (a policy reflected in the statute) so as to prevent the unjustified or improper timewise extension of the "right to exclude" granted by a patent and to prevent possible harassment by multiple assignees. See *In re Goodman*, 11 F.3d 1046, 29 USPQ2d 2010 (Fed. Cir. 1993); *In re Longi*, 759 F.2d 887, 225 USPQ 645 (Fed. Cir. 1985); *In re Van Ornum*, 686 F.2d 937, 214 USPQ 761 (CCPA 1982); *In re Vogel*, 422 F.2d 438, 164 USPQ 619 (CCPA 1970);and, *In re Thorington*, 418 F.2d 528, 163 USPQ 644 (CCPA 1969).

A timely filed terminal disclaimer in compliance with 37 CFR 1.321(c) may be used to overcome an actual or provisional rejection based on a nonstatutory double patenting ground provided the conflicting application or patent is shown to be commonly owned with this application. See 37 CFR 1.130(b).

Effective January 1, 1994, a registered attorney or agent of record may sign a terminal disclaimer. A terminal disclaimer signed by the assignee must fully comply with 37 CFR 3.73(b).

10. Claims 74-89 are rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over claims 1-62 of U.S. Patent No. 5,981,840. Although the conflicting claims are not identical, they are not patentably distinct from each other because the maize plants of the instant application would be produced by the methods of the issued patent, and hence are obvious over the claims of the issued patent.

11. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Amy J. Nelson whose telephone number is (703) 306-3218. The examiner can normally be reached on Monday-Friday from 8:30 AM - 5:00 PM.

The fax phone number for this Group is (703) 308-4242 or (703) 305-3014.

Any inquiry of a general nature or relating to the status of this application, or if the examiner cannot be reached as indicated above, should be directed to the legal analyst, Gwendolyn Payne, whose telephone number is (703) 305-2475.

AMY J. NELSON, PH.D
SUPERVISORY PATENT EXAMINER
TECHNOLOGY CENTER 1600

Amy J. Nelson, Ph.D.
August 29, 2002